ATTACHMENT 5

March 2009 - Groundwater Sample Information Sheets

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 301	Well Location:

Monitoring Well Data	
Well Material	(PVC/SS/Teflon)
Inside Diameter, in.	(1 2 4 6)
Stick up or stick down height	ft
Total depth of well (TD)	49.59 ft
Depth to product	ft
Depth to water (DTW)	13.46 ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	ft
Bubbles purged from flow cell?	Y / N
Is drawdown >0.3 feet	Y / N
Was passive sampling used?	Y / N
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%							
Spec. Cond (µmhos)	+/- 3%							
D.O. (mg/L)	+/- 10%**							
pH	+/- 0.1							
ORP (mV)	+/- 10 mV**							
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: ____/____/____ Sample Time: ____: ____ (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 133R	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	16.02	ft
Depth to product		ft
Depth to water (DTW)	9.68	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling		
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	13.0	ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	(Y) N	
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	(Y) N	
3 Well volumes =	=	gal		Was passive sampling used?	Y (N)	
Purge method (B = bailer, P = pump)	B / P			Flowrate =		mL/min
				ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	8.90	8.87	8.94				
Spec. Cond (µmhos)	+/- 3%	1.127	1.125	1.124				
D.O. (mg/L)	+/- 10%**	3.56	3.22	3.06				
pH	+/- 0.1	7.38	7.38	7.38				
ORP (mV)	+/- 10 mV**	356	360	362				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.0 gallons
Sample Date: 3 / 11 / 09 Sample Time: 16 : 30 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 135	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	18.78	ft
Depth to product		ft
Depth to water (DTW)	13.44	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	ft
Bubbles purged from flow cell?	Y / N
Is drawdown >0.3 feet	Y / N
Was passive sampling used?	Y / N
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%							
Spec. Cond (µmhos)	+/- 3%							
D.O. (mg/L)	+/- 10%**							
pH	+/- 0.1							
ORP (mV)	+/- 10 mV**							
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: ____/____/____ Sample Time: ____: ____ (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 170 S	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	26.83	ft
Depth to product		ft
Depth to water (DTW)	20.57	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	ft
Bubbles purged from flow cell?	Y / N
Is drawdown >0.3 feet	Y / N
Was passive sampling used?	Y / N
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%							
Spec. Cond (µmhos)	+/- 3%							
D.O. (mg/L)	+/- 10%**							
pH	+/- 0.1							
ORP (mV)	+/- 10 mV**							
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: ____/____/____ Sample Time: ____: ____ (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good
Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 170 D	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	38.42	ft
Depth to product	20.49	ft
Depth to water (DTW)		ft

Sample Types (circle all applicable)

Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	Y / N
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	Y / N
3 Well volumes =	=	gal		Was passive sampling used?	Y / N
Purge method (B = bailer, P = pump)	B / P			Flowrate =	mL/min
				ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%							
Spec. Cond (µmhos)	+/- 3%							
D.O. (mg/L)	+/- 10%**							
pH	+/- 0.1							
ORP (mV)	+/- 10 mV**							
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: ____/____/____ Sample Time: ____: ____ (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good

Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 159	Well Location:

Monitoring Well Data	
Well Material	(PVC/SS/Teflon)
Inside Diameter, in.	(1 2 4 6)
Stick up or stick down height	ft
Total depth of well (TD)	18.73 ft
Depth to product	ft
Depth to water (DTW)	12.32 ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		⇐OR⇒	**Micropurge sampling**	
Height of water column (H = TD – DTW)	ft		Depth of pump placement (place mid-screen)	ft
Conversion value (CV)*	x		Bubbles purged from flow cell?	Y / N
1 Well volume = H x CV	= gal		Is drawdown >0.3 feet	Y / N
3 Well volumes =	= gal		Was passive sampling used?	Y / N
Purge method (B = bailer, P = pump)	B / P		Flowrate =	mL/min
			ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%							
Spec. Cond (µmhos)	+/- 3%							
D.O. (mg/L)	+/- 10%**							
pH	+/- 0.1							
ORP (mV)	+/- 10 mV**							
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: ____/____/____ Sample Time: ____: ____ (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good

Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 168 S	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	19.25	ft
Depth to product		ft
Depth to water (DTW)	17.68	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	Y / N
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	Y / N
3 Well volumes =	=	gal		Was passive sampling used?	Y / N
Purge method (B = bailer, P = pump)	B / P			Flowrate =	mL/min
				ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%							
Spec. Cond (µmhos)	+/- 3%							
D.O. (mg/L)	+/- 10%**							
pH	+/- 0.1							
ORP (mV)	+/- 10 mV**							
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: ____/____/____ Sample Time: ____:____ (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 168 D	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	28.56	ft
Depth to product		ft
Depth to water (DTW)	17.59	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	ft
Bubbles purged from flow cell?	Y / N
Is drawdown >0.3 feet	Y / N
Was passive sampling used?	Y / N
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%							
Spec. Cond (µmhos)	+/- 3%							
D.O. (mg/L)	+/- 10%**							
pH	+/- 0.1							
ORP (mV)	+/- 10 mV**							
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: ____/____/____ Sample Time: ____:____ (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 17S	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	21.13	ft
Depth to product		ft
Depth to water (DTW)	15.56	ft

Sample Types (circle all applicable)

Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	ft
Bubbles purged from flow cell?	Y / N
Is drawdown >0.3 feet	Y / N
Was passive sampling used?	Y / N
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%							
Spec. Cond (µmhos)	+/- 3%							
D.O. (mg/L)	+/- 10%**							
pH	+/- 0.1							
ORP (mV)	+/- 10 mV**							
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: ____/____/____ Sample Time: ____: ____ (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 171 D	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	48.82	ft
Depth to product		ft
Depth to water (DTW)	15.92	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	ft
Bubbles purged from flow cell?	Y / N
Is drawdown >0.3 feet	Y / N
Was passive sampling used?	Y / N
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%							
Spec. Cond (µmhos)	+/- 3%							
D.O. (mg/L)	+/- 10%**							
pH	+/- 0.1							
ORP (mV)	+/- 10 mV**							
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: ____/____/____ Sample Time: ____: ____ (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good

Signature: Kathy Eck Date: 3-11-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 167 D	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	32.50	ft
Depth to product		ft
Depth to water (DTW)	18.51	ft

Sample Types (circle all applicable)

Monitoring Well
Grab/Composite
Split Sample
(Duplicate) Duplicate ID: MW-167-D dup
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling		
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	27.0	ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	Y / N	
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	Y / N	
3 Well volumes =	=	gal		Was passive sampling used?	Y / N	
Purge method (B = bailer, P = pump)	B / P			Flowrate =		mL/min
				ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	13.22	13.79	15.34	15.72			
Spec. Cond (µmhos)	+/- 3%	0.740	0.736	0.732	0.731			
D.O. (mg/L)	+/- 10%**	1.08	0.52	0.37	0.30			
pH	+/- 0.1	7.55	7.55	7.54	7.55			
ORP (mV)	+/- 10 mV**	347	333	296	250			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.75 gallons
Sample Date: 3/12/09 Sample Time: 12 : 10 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Neptune cap + lock

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 167 S	Well Location:

Monitoring Well Data	
Well Material	(PVC/SS/Teflon)
Inside Diameter, in.	(1 2 4 6)
Stick up or stick down height	ft
Total depth of well (TD)	21.86 ft
Depth to product	ft
Depth to water (DTW)	18.33 ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		⇐OR⇒	**Micropurge sampling**	
Height of water column (H = TD – DTW)	ft		Depth of pump placement (place mid-screen)	20.0 ft
Conversion value (CV)*	x		Bubbles purged from flow cell?	(Y) / N
1 Well volume = H x CV	= gal		Is drawdown >0.3 feet	(Y) / N
3 Well volumes =	= gal		Was passive sampling used?	Y / (N)
Purge method (B = bailer, P = pump)	B / P		Flowrate =	mL/min
			ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	13.61	13.80	13.95				
Spec. Cond (µmhos)	+/- 3%	1.85	1.85	1.83				
D.O. (mg/L)	+/- 10%**	0.91	0.58	0.50				
pH	+/- 0.1	7.12	7.13	7.13				
ORP (mV)	+/- 10 mV**	361	358	355				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3/12/09 Sample Time: 11 : 45 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: replace cap + lock

Signature: Kathy Ezk Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP Former Allison Plant 10	KEI Project #: 2829E 001/003
Sample I.D.: MW- 157	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	17.15	ft
Depth to product		ft
Depth to water (DTW)	12.20	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling		
Height of water column (H = TD – DTW)	4.95	ft		Depth of pump placement (place mid-screen)	14.0	ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	Y / N	
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	Y / N	
3 Well volumes =	=	gal		Was passive sampling used?	Y / N	
Purge method (B = bailer, P = pump)	B / P			Flowrate =		mL/min
				ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	9.83	10.51	10.59				
Spec. Cond (µmhos)	+/- 3%	0.778	0.778	0.776				
D.O. (mg/L)	+/- 10%**	1.67	1.19	0.88				
pH	+/- 0.1	7.52	7.54	7.54				
ORP (mV)	+/- 10 mV**	440	441	441				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.0 gallons
Sample Date: 3 / 12 / 09 Sample Time: 9 : 20 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 165	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	19.06	ft
Depth to product	~~FF~~	ft
Depth to water (DTW)	14.78	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling		
Depth of pump placement (place mid-screen)	16.5	ft
Bubbles purged from flow cell?	(Y) / N	
Is drawdown >0.3 feet	(Y) / N	
Was passive sampling used?	Y / (N)	
Flowrate =		mL/min
ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	14.80	14.91	15.00	15.05			
Spec. Cond (µmhos)	+/- 3%	0.817	0.828	0.831	0.832			
D.O. (mg/L)	+/- 10%**	1.30	1.57	1.47	1.44			
pH	+/- 0.1	7.56	7.58	7.58	7.58			
ORP (mV)	+/- 10 mV**	405	378	346	340			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 3.0 gallons
Sample Date: 3/12/09 Sample Time: 9 : 50 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: replaced cap + lock

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 166 D	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	49.57	ft
Depth to product		ft
Depth to water (DTW)	14.56	ft

Sample Types (circle all applicable)

Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling		
Depth of pump placement (place mid-screen)	44.5	ft
Bubbles purged from flow cell?	(Y) / N	
Is drawdown >0.3 feet	(Y) / N	
Was passive sampling used?	Y (N)	
Flowrate =		mL/min
ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	14.22	14.79	14.71	14.76			
Spec. Cond (µmhos)	+/- 3%	0.783	0.783	0.792	0.794			
D.O. (mg/L)	+/- 10%**	1.63	0.58	0.39	0.35			
pH	+/- 0.1	7.64	7.66	7.67	7.67			
ORP (mV)	+/- 10 mV**	147	105	90	86			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3/12/09 Sample Time: 10 : 15 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 165D	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	46.40	ft
Depth to product		ft
Depth to water (DTW)	13.79	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling		
Depth of pump placement (place mid-screen)	40.0	ft
Bubbles purged from flow cell?	Y / N	
Is drawdown >0.3 feet	Y / N	
Was passive sampling used?	Y / N	
Flowrate =		mL/min
ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	7.22	8.43	9.42	9.50			
Spec. Cond (µmhos)	+/- 3%	0.401	0.657	0.887	0.908			
D.O. (mg/L)	+/- 10%**	1.21	0.63	0.36	0.30			
pH	+/- 0.1	7.68	7.65	7.70	7.70			
ORP (mV)	+/- 10 mV**	106	94	81	77			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3/12/09 Sample Time: 11 : 00 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: replace cap & lock

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 16 S S	Well Location:

Monitoring Well Data	
Well Material	(PVC/SS/Teflon)
Inside Diameter, in.	(1 2 4 6)
Stick up or stick down height	ft
Total depth of well (TD)	19.60 ft
Depth to product	ft
Depth to water (DTW)	13.99 ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)	ft		Depth of pump placement (place mid-screen)	16.50 ft
Conversion value (CV)*	x		Bubbles purged from flow cell?	(Y) / N
1 Well volume = H x CV	= gal		Is drawdown >0.3 feet	(Y) / N
3 Well volumes =	= gal		Was passive sampling used?	Y (N)
Purge method (B = bailer, P = pump)	B / P		Flowrate =	mL/min
			ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	4.22	4.31	4.32	4.30	4.32		
Spec. Cond (µmhos)	+/- 3%	0.829	0.846	0.863	0.877	0.881		
D.O. (mg/L)	+/- 10%**	2.20	0.75	0.51	0.39	0.36		
pH	+/- 0.1	7.94	7.89	7.85	7.83	7.83		
ORP (mV)	+/- 10 mV**	158	109	99	95	93		
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3 / 12 / 09 Sample Time: 10 : 40 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear)/Slightly Turbid/Turbid/Very Turbid)
Well condition: replaced cap & lock

Signature: Kathy Eak Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 169D	Well Location:

Monitoring Well Data	
Well Material	(PVC/SS/Teflon)
Inside Diameter, in.	(1 2 4 6)
Stick up or stick down height	ft
Total depth of well (TD)	35.05 ft
Depth to product	ft
Depth to water (DTW)	19.91 ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)	ft		Depth of pump placement (place mid-screen)	29.0 ft
Conversion value (CV)*	x		Bubbles purged from flow cell?	(Y)/N
1 Well volume = H x CV	= gal		Is drawdown >0.3 feet	(Y)/N
3 Well volumes =	= gal		Was passive sampling used?	Y (N)
Purge method (B = bailer, P = pump)	B / P		Flowrate =	mL/min
			ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	14.17	14.24	14.14	14.28			
Spec. Cond (µmhos)	+/- 3%	0.562	0.784	0.818	0.826			
D.O. (mg/L)	+/- 10%**	0.83	0.39	0.29	0.28			
pH	+/- 0.1	7.53	7.49	7.49	7.48			
ORP (mV)	+/- 10 mV**	138	94	87	83			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3 / 12 /09 Sample Time: 13 : 40 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Cover has no bolts - could use some repair.

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 16 9 S	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	23.47	ft
Depth to product		ft
Depth to water (DTW)	19.86	ft

Sample Types (circle all applicable)

Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling		
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	21.5	ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	(Y) / N	
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	(Y) / N	
3 Well volumes =	=	gal		Was passive sampling used?	Y / (N)	
Purge method (B = bailer, P = pump)	B / P			Flowrate =		mL/min
				ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	13.16	13.65	12.97				
Spec. Cond (µmhos)	+/- 3%	1.021	1.025	1.029				
D.O. (mg/L)	+/- 10%**	1.57	1.31	1.41				
pH	+/- 0.1	7.38	7.31	7.29				
ORP (mV)	+/- 10 mV**	308	303	300				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2 gallons
Sample Date: 3 / 12 / 09 Sample Time: 13 : 30 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: needs a cover - missing

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 152	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	18.61	ft
Depth to product		ft
Depth to water (DTW)	13.79	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling		
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	15.0	ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	Y / N	
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	Y / N	
3 Well volumes =	=	gal		Was passive sampling used?	Y / N	
Purge method (B = bailer, P = pump)	B / P			Flowrate =		mL/min
				ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	12.54	13.20	13.28	13.51			
Spec. Cond (µmhos)	+/- 3%	0.455	0.470	0.463	0.462			
D.O. (mg/L)	+/- 10%**	1.56	2.56	1.84	1.61			
pH	+/- 0.1	7.64	7.62	7.65	7.65			
ORP (mV)	+/- 10 mV**	379	342	342	343			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)	monsoon stopped - re-tried 3-12-09							

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3 / 12 / 09 Sample Time: 14 : 10 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good - but cap sits too high to shut lid tight - PVC casing needs to be cut down

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 150	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	18.41	ft
Depth to product		ft
Depth to water (DTW)	13.22	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling		
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	15.0	ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	(Y) / N	
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	(Y) / N	
3 Well volumes =	=	gal		Was passive sampling used?	Y / (N)	
Purge method (B = bailer, P = pump)	B / P			Flowrate =		mL/min
				ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	12.18	12.36	12.65				
Spec. Cond (µmhos)	+/- 3%	0.772	0.778	0.783				
D.O. (mg/L)	+/- 10%**	2.64	1.90	1.04				
pH	+/- 0.1	7.40	7.38	7.38				
ORP (mV)	+/- 10 mV**	395	394	392				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3 / 12 / 09 Sample Time: 14 : 30 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good, changed lock

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 10-1R	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	18.73	ft
Depth to product		ft
Depth to water (DTW)	14.66	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: MW-10-1R dup)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling		
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	16.75	ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	(Y)/ N	
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	(Y)/ N	
3 Well volumes =	=	gal		Was passive sampling used?	Y /(N)	
Purge method (B = bailer, P = pump)	B / P			Flowrate =		mL/min
				ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	10.63	10.74	10.77				
Spec. Cond (µmhos)	+/- 3%	0.827	0.819	0.812				
D.O. (mg/L)	+/- 10%**	4.56	3.18	2.56				
pH	+/- 0.1	7.37	7.37	7.37				
ORP (mV)	+/- 10 mV**	419	420	419				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3/12/09 Sample Time: 14:55 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP Former Allison Plant 10	KEI Project #: 2829E 001/003
Sample I.D.: MW- 148	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	24.52	ft
Depth to product		ft
Depth to water (DTW)	11.36	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling		
Depth of pump placement (place mid-screen)	19.0	ft
Bubbles purged from flow cell?	(Y)/ N	
Is drawdown >0.3 feet	(Y)/ N	
Was passive sampling used?	Y / (N)	
Flowrate =		mL/min
ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	12.09	12.02	12.15	12.10			
Spec. Cond (µmhos)	+/- 3%	1.340	1.359	1.331	1.317			
D.O. (mg/L)	+/- 10%**	0.79	0.57	0.40	0.39			
pH	+/- 0.1	7.25	7.26	7.27	7.27			
ORP (mV)	+/- 10 mV**	427	423	417	415			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3/12/09 Sample Time: 15 : 25 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good - replaced cap & lock

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP Former Allison Plant 10	KEI Project #: 2829E 001/003
Sample I.D.: MW- 147 AR	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	28.64	ft
Depth to product		ft
Depth to water (DTW)	11.43	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	23.0 ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	(Y) / N
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	(Y) / N
3 Well volumes =	=	gal		Was passive sampling used?	Y / (N)
Purge method (B = bailer, P = pump)	B / P			Flowrate =	mL/min
				ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	13.21	13.35	13.40	13.51			
Spec. Cond (µmhos)	+/- 3%	1,378	1,368	1,365	1,359			
D.O. (mg/L)	+/- 10%**	0.83	0.48	0.36	0.28			
pH	+/- 0.1	7.31	7.32	7.34	7.33			
ORP (mV)	+/- 10 mV**	135	118	111	105			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3 / 12 / 09 Sample Time: 16 : 05 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP Former Allison Plant 10	KEI Project #: 2829E 001/003
Sample I.D.: MW- 132 R	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	19.04	ft
Depth to product		ft
Depth to water (DTW)	12.50	ft

Sample Types (circle all applicable)

Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	14.5 ft
Bubbles purged from flow cell?	(Y) / N
Is drawdown >0.3 feet	(Y) / N
Was passive sampling used?	Y / (N)
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	10.46	10.50	10.52				
Spec. Cond (µmhos)	+/- 3%	0.917	0.928	0.930				
D.O. (mg/L)	+/- 10%**	3.40	2.76	2.66				
pH	+/- 0.1	7.64	7.61	7.59				
ORP (mV)	+/- 10 mV**	396	397	397				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3 /12 /09 Sample Time: 15 : 50 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good

Signature: Kathy Esk Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 156	Well Location:

Monitoring Well Data	
Well Material	(PVC/SS/Teflon)
Inside Diameter, in.	(1 2 4 6)
Stick up or stick down height	ft
Total depth of well (TD)	18.42 ft
Depth to product	ft
Depth to water (DTW)	12.31 ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	~~14.5~~ 15.0 ft
Bubbles purged from flow cell?	(Y)/ N
Is drawdown >0.3 feet	(Y)/ N
Was passive sampling used?	Y /(N)
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	10.59	10.66	10.73	10.78			
Spec. Cond (µmhos)	+/- 3%	0.466	0.490	0.518	0.537			
D.O. (mg/L)	+/- 10%**	7.62	6.69	5.47	4.87			
pH	+/- 0.1	7.64	7.60	7.57	7.55			
ORP (mV)	+/- 10 mV**	364	371	375	378			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3/12/09 Sample Time: 16 : 45 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of ~~preservatives~~? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: OK - replaced lock

Signature: Kathy Fok Date: 3-12-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 302-	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	54.19	ft
Depth to product	13.12	ft
Depth to water (DTW)		ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: ~~MW-302dup~~ Kee)
~~MS/MSD~~ Kee
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling		
Depth of pump placement (place mid-screen)	40.0	ft
Bubbles purged from flow cell?	(Y) / N	
Is drawdown >0.3 feet	Y / (N)	
Was passive sampling used?	Y / (N)	
Flowrate =		mL/min
ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	13.27	13.82	13.94	14.04	14.04		
Spec. Cond (µmhos)	+/- 3%	657	628	624	618	618		
D.O. (mg/L)	+/- 10%**	0.20	0	0	0	0		
pH	+/- 0.1	8.06	8.07	8.06	8.07	8.06		
ORP (mV)	+/- 10 mV**	-14.7	-50.3	-75.8	-99.4	-105.5		
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3 /13 /09 Sample Time: 16 :40 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3·13·09

Used Hanna - Hydrolab broke

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 153	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	20.80	ft
Depth to product		ft
Depth to water (DTW)	11.98	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: MW-153 Dup)
(MS/MSD) MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	15.0 ft
Bubbles purged from flow cell?	(Y) N
Is drawdown >0.3 feet	(Y) N
Was passive sampling used?	Y / (N)
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	11.78	11.54	11.62				
Spec. Cond (µmhos)	+/- 3%	1586	1618	1628				
D.O. (mg/L)	+/- 10%**	8.49	8.40	8.42				
pH	+/- 0.1	7.83	7.82	7.80				
ORP (mV)	+/- 10 mV**	97.8	98.4	98.7				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3 / 13 / 09 Sample Time: 16 : 10 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good

Signature: Kathy Eck Date: 3-13-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 173	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	17.65	ft
Depth to product		ft
Depth to water (DTW)	13.50	ft

Sample Types (circle all applicable)

Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	15.50 ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	(Y) / N
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	(Y) / N
3 Well volumes =	=	gal		Was passive sampling used?	Y / (N)
Purge method (B = bailer, P = pump)	B / P			Flowrate =	mL/min
				ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	11.24	11.38	11.42				
Spec. Cond (µmhos)	+/- 3%	0.617	0.634	0.640				
D.O. (mg/L)	+/- 10%**	1.26	0.78	0.69				
pH	+/- 0.1	7.55	7.58	7.58				
ORP (mV)	+/- 10 mV**	380	383	384				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: _____ gallons
Sample Date: 3 / 13 / 09 Sample Time: 10 : 00 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES NO explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-13-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 163	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	19.40	ft
Depth to product		ft
Depth to water (DTW)	11.72	ft

Sample Types (circle all applicable)

Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	14.0 ft
Bubbles purged from flow cell?	(Y) / N
Is drawdown >0.3 feet	(Y) / N
Was passive sampling used?	Y / (N)
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	10.52	10.59	10.33	10.87	10.92		
Spec. Cond (µmhos)	+/- 3%	0.702	0.718	0.724	0.736	0.739		
D.O. (mg/L)	+/- 10%**	1.26	1.23	0.82	1.17	1.14		
pH	+/- 0.1	7.38	7.34	7.35	7.34	7.34		
ORP (mV)	+/- 10 mV**	409	387	298	207	206		
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3/13/09 Sample Time: 10 : 25 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid) slightly turning grey
Well condition: good - replaced cap & lock

Signature: Kathy Eck Date: 3-13-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- IW1	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	14.85	ft
Depth to product		ft
Depth to water (DTW)	11.93	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling	
Depth of pump placement (place mid-screen)	13.35 ft
Bubbles purged from flow cell?	Y / N
Is drawdown >0.3 feet	Y / N
Was passive sampling used?	Y / N
Flowrate =	mL/min
ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	10.71	10.79	11.09	11.21			
Spec. Cond (µmhos)	+/- 3%	1173	1128	953	943			
D.O. (mg/L)	+/- 10%**	1.31	0.18	0	0			
pH	+/- 0.1	7.80	7.76	7.72	7.70			
ORP (mV)	+/- 10 mV**	-258.2	-271.6	-290.1	-293.3			
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3/13/09 Sample Time: 12 : 40 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition:

Signature: Kathy Eck Date: 3-13-09

Switched to Hanna - Hydrolab broke

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- IW2	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	16.86	ft
Depth to product		ft
Depth to water (DTW)	13.02	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	14.75 ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	(Y)/N
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	(Y)/N
3 Well volumes =	=	gal		Was passive sampling used?	Y/(N)
Purge method (B = bailer, P = pump)	B / P			Flowrate =	mL/min
				ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	12.15	12.40	12.39				
Spec. Cond (µmhos)	+/- 3%	764	743	741				
D.O. (mg/L)	+/- 10%**	0	0	0				
pH	+/- 0.1	7.81	7.81	7.88				
ORP (mV)	+/- 10 mV**	-178.2	-180.0	-180.3				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 2.0 gallons
Sample Date: 3/13/09 Sample Time: 13:05 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-13-09

Switched to Hanna - Hydrolab MiRo

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 151	Well Location:

Monitoring Well Data	
Well Material	(PVC/SS/Teflon)
Inside Diameter, in.	(1 2 4 6)
Stick up or stick down height	ft
Total depth of well (TD)	18.58 ft
Depth to product	ft
Depth to water (DTW)	14.11 ft

Sample Types (circle all applicable)

Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)	ft		Depth of pump placement (place mid-screen)	16.50 ft
Conversion value (CV)*	x		Bubbles purged from flow cell?	(Y) / N
1 Well volume = H x CV	= gal		Is drawdown >0.3 feet	(Y) / N
3 Well volumes =	= gal		Was passive sampling used?	Y / (N)
Purge method (B = bailer, P = pump)	B / P		Flowrate =	mL/min
			ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	16.36	11.43	11.40				
Spec. Cond (µmhos)	+/- 3%	758	752	747				
D.O. (mg/L)	+/- 10%**	1.66	1.33	1.30				
pH	+/- 0.1	7.74	7.74	7.74				
ORP (mV)	+/- 10 mV**	-36.2	-35.4	-34.3				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3/13/09 Sample Time: 13:20 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-13-09

switched to Hanna - Hydrolab Mike

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP – Former Allison Plant 10	KEI Project #: 2829E-001/003
Sample I.D.: MW- 164	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	24.94	ft
Depth to product		ft
Depth to water (DTW)	19.24	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling			⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)		ft		Depth of pump placement (place mid-screen)	22.5 ft
Conversion value (CV)*	x			Bubbles purged from flow cell?	(Y) / N
1 Well volume = H x CV	=	gal		Is drawdown >0.3 feet	(Y) / N
3 Well volumes =	=	gal		Was passive sampling used?	Y / (N)
Purge method (B = bailer, P = pump)	B / P			Flowrate =	mL/min
				ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	14.50	14.53	14.47				
Spec. Cond (µmhos)	+/- 3%	961	961	959				
D.O. (mg/L)	+/- 10%**	0	0	0				
pH	+/- 0.1	7.64	7.63	7.62				
ORP (mV)	+/- 10 mV**	16.6	19.1	20.5				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3/13/09 Sample Time: 13 : 45 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: good

Signature: Kathy Eck Date: 3-13-09

used Hanna - Hydrolab not working

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP Former Allison Plant 10	KEI Project #: 2829E 001/003
Sample I.D.: MW- 146	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	23.24	ft
Depth to product		ft
Depth to water (DTW)	9.68	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling		
Depth of pump placement (place mid-screen)	18.0	ft
Bubbles purged from flow cell?	(Y) / N	
Is drawdown >0.3 feet	(Y) / N	
Was passive sampling used?	Y (N)	
Flowrate =		mL/min
ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	12.63	12.72	12.69				
Spec. Cond (µmhos)	+/- 3%	935	934	916				
D.O. (mg/L)	+/- 10%**	0.05	0	0				
pH	+/- 0.1	7.55	7.66	7.65				
ORP (mV)	+/- 10 mV**	91.5	98.6	93.3				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.0 gallons
Sample Date: 3/13/09 Sample Time: 15 : 45 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: Good - replace cap + lock

Signature: BKathy Eck Date: 3-13-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP Former Allison Plant 10	KEI Project #: 2829E 001/003
Sample I.D.: MW- MW-160	Well Location:

Monitoring Well Data	
Well Material	(PVC/SS/Teflon)
Inside Diameter, in.	(1 2 4 6)
Stick up or stick down height	ft
Total depth of well (TD)	10.55 ft
Depth to product	ft
Depth to water (DTW)	2.83 ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		⇐OR⇒	Micropurge sampling	
Height of water column (H = TD – DTW)	ft		Depth of pump placement (place mid-screen)	ft
Conversion value (CV)*	x		Bubbles purged from flow cell?	Y / N
1 Well volume = H x CV	= gal		Is drawdown >0.3 feet	Y / N
3 Well volumes =	= gal		Was passive sampling used?	Y / N
Purge method (B = bailer, P = pump)	B / P		Flowrate =	mL/min
			ID number from controller console	#

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	9.77	9.59	9.46				
Spec. Cond (µmhos)	+/- 3%	1030	1040	1043				
D.O. (mg/L)	+/- 10%**	5.60	5.19	4.90				
pH	+/- 0.1	7.80	7.77	7.76				
ORP (mV)	+/- 10 mV**	115.6	114.2	113.4				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3/13/09 Sample Time: 15 : 10 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
eaction upon addition of preservatives? YES (NO) explain:_____
pearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
ll condition: 7 under 3' of sandy silt

ture: Kathy Eck Date: 3-13-09

KERAMIDA ENVIRONMENTAL, INC.
GROUNDWATER SAMPLE INFORMATION SHEET

Facility Name: GP Former Allison Plant 10	KEI Project #: 2829E 001/003
Sample I.D.: MW- MW-161	Well Location:

Monitoring Well Data		
Well Material	(PVC/SS/Teflon)	
Inside Diameter, in.	(1 2 4 6)	
Stick up or stick down height		ft
Total depth of well (TD)	12.89	ft
Depth to product		ft
Depth to water (DTW)	4.26	ft

Sample Types (circle all applicable)
Monitoring Well
Grab/Composite
Split Sample
Duplicate (Duplicate ID: _____)
MS/MSD
Other_____

Conventional sampling		
Height of water column (H = TD – DTW)		ft
Conversion value (CV)*	x	
1 Well volume = H x CV	=	gal
3 Well volumes =	=	gal
Purge method (B = bailer, P = pump)	B / P	

⇐OR⇒

Micropurge sampling		
Depth of pump placement (place mid-screen)		ft
Bubbles purged from flow cell?	Y / N	
Is drawdown >0.3 feet	Y / N	
Was passive sampling used?	Y / N	
Flowrate =		mL/min
ID number from controller console	#	

*Conversion values (gal/ft): 1" dia = 0.04, 2" dia = 0.16, 4" dia = 0.65, 6" dia = 1.47

Field Test(s) Performed	Stability Range	Result (3 min)	Result (6 min)	Result (9 min)	Result (12 min)	Result (15 min)	Result (18 min)	Result (21 min)
Temperature (°C)	+/- 3%	9.65	10.02	10.54				
Spec. Cond (µmhos)	+/- 3%	959	961	958				
D.O. (mg/L)	+/- 10%**	6.05	5.09	4.63				
pH	+/- 0.1	7.76	7.75	7.74				
ORP (mV)	+/- 10 mV**	109	108.3	107.7				
Turbidity (NTU)	+/- 10%**							
H_2S (mg/L)								
Fe^{2+} (mg/L)								

Check stability after three readings and every reading thereafter until achieved.
**Only one of these parameters must reach stability.

Observations:
Volume of water purged from well: 1.5 gallons
Sample Date: 3/13/09 Sample Time: 15 : 25 (military time)
Was metals sample filtered prior to preservation? YES NO method: 0.45 µm cartridge / other: _____
Color of water before filtration:_____ After filtration:_____
Reaction upon addition of preservatives? YES (NO) explain:_____
Appearance of Water: (Clear/Slightly Turbid/Turbid/Very Turbid)
Well condition: OK buried

Signature: Kathy Eck Date: 3-13-09